

# The Dalles Dam Fishway Status Report

Date: 03/02/2014  
 Inspection Period: 02/23/2014-03/01/2014

## THE DALLES DAM



US Army Corps  
 of Engineers  
 Portland District

The Dalles Project-Fisheries  
 P.O. Box 564  
 The Dalles, OR 97058-9998  
 Phone: 541-506-3800

*Fishways are inspected once daily during the winter plus one SCADA inspection when East ladder operational*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections:		Temperature:
			12	38.6	F
			Comments		Secchi: 3.1 feet
<b>NORTH FISHWAY - Dewatered 02/4/14 - 02/27/14</b>					
Exit differential	0	≤ 0.5'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Entrance differential	0	1.0' - 2.0'			
Entrance weir N1	0	depth (≥ 8')			
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
<b>EAST FISHWAY</b>					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.		
Weir 158-159 differential	0	1.0' ± 0.1'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Junction pool weir JP6	0	depth (≥ 7')	Manually adjusted as needed.		
East entrance differential	0	1.0' - 2.0'	Average	1.5	Daily differentials & weir depths, see <b>AVGS</b> tab.
Entrance weir E1	0	No criteria	Average	closed	
Entrance weir E2	0	depth (≥ 8')	Average	11.7	Manually adjusted.
Entrance weir E3	closed	depth (≥ 8')	Average	11.7	
Collection channel velocity	N/A	1.5 - 4 fps			
Transportation channel velocity	N/A	1.5 - 4 fps			
North channel velocity	N/A	1.5 - 4 fps			
South channel velocity	N/A	1.5 - 4 fps			
West entrance differential	0	1.0' - 2.0'	Average	1.4	
Entrance weir W1	2	depth (≥ 8')	Average	8.6	Shallow during 1 fish unit operation
Entrance weir W2	0	depth (≥ 8')	Average	8.9	
Entrance weir W3	closed	No criteria	Average	closed	
South entrance differential	8	1.0' - 2.0'	Average	0.9	Reading error. Stillwells recalibrated. Actual differential OK.
Entrance weir S1	4	depth (≥ 8')	Average	7.9	
Entrance weir S2	2	depth (≥ 8')	Average	6.8	Closed for 1 fish unit operation through half the week

### JUVENILE PASSAGE

End gate closed. Two sluiceways open to forebay.

Unit priority starts Mar1.

**OTHER ISSUES:**

**Birds/Sea lions:**

Bird observation data collected once daily. Few eagles foraging/roosting at Westick park. See avian zones map and distribution details.

**Operations:**

North fishway return to service Feb27 with PUD aux water in bypass. PUD returned Feb28. East fishway in service. Sluiceway opened midnight Mar1 with 2 sluiceways open at unit 1 and 18.

**Current Outages:**

Transformer 8 (MU15 & MU16) de-rated to single unit full load ops. Fish unit F1 out Feb 24-25 for as built documentation/future upgrade planning. Fish unit F2 in operation during that time. Station Service 02 out Jan21 to Feb27 '14 for Digital Governor Upgrade Main Unit 4 out Jan21 to Feb27 '14 for overhaul.

**Maintenance:**

East fishway work completed; west diffuser grating attachment, exit weir 159 rehab, count station window brush repair, exit deck drains/leak repair, and all routine preventative maintenance on entrance weirs, exit weirs and count station equipment. Working on east count bathroom rehab.

Plans underway to build new weir to replace 158 or 159 next year pending funding, east fishway dewatering pump repairs and modify east entrance dewatering bulkheads for better fit.

North fishway maintenance completed; 70% vegetation removal from fishladder walls, assessment of fishladder rock wall integrity, preventative maintenance of count station and ROV inspection of north entrance grating.

Items on 'to do' list for upcoming years; Upgrade east exit weirs 154-157, build new 158/9 weir, stabilize north ladder rocks, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels and repair/modify east fishway dewatering pumps.

Items fish related but not fish funded; spillway evaluation to prioritize upgrades, spillway crane rehab and spillgate 10/11 wire rope replacement. All on Critical Infrastructure list and Unfunded Requirement list

**Studies:**

**PIT** - North PIT room finishing touches on door and interior. PSMFC investigating possible sluiceway antenna options. Awaiting BPA comment.

**EFL** - Plan for 10' dia. pipe through dam, under roadway and into AWS conduit under east fishladder. 90% DDR review underway. Reservoir Control Center increasing involvement in review. On site tour for RCC reps and new district bio Feb 4.

**PUD** - FERC license modification request submitted for additional north turbine.

**Lamprey** - No further fishladder mods planned for this winter.

**Research/Contractors:**

University of Idaho maintaining antennas. Plans for solar panel installation for east forebay deck antenna for next season.

Dive removal of remaining pier nose USGS antennas leftover from '90s occurred Feb20-24. Five of 16 removed. Eleven of 18 removed. To resume next winter in conjunction with JSAT pipe removal.

USGS successfully removing peirnose plates without going outside handrail. JSAT pipe removal planned for next winter.

Removal last set of 3 derelict Vertical Barrier Screens (VBS) from MU 12 gatewell slot scheduled week of Aug11. Pending CRFM funding.

Approval letters forwarded for; ODFW forebay pikeminnow survey, PSMFC fish sampling at PUD, Univ Idaho adult radiotelemetry, USGS water quality.

Approved by;  
Ron D. Twiner  
Operation Project Manager  
The Dalles Dam

# The Dalles Dam Avian Zones

Washington Shore

FB1

PH-T1

PH-T2

SW-T1

PH-T3

SW-T3

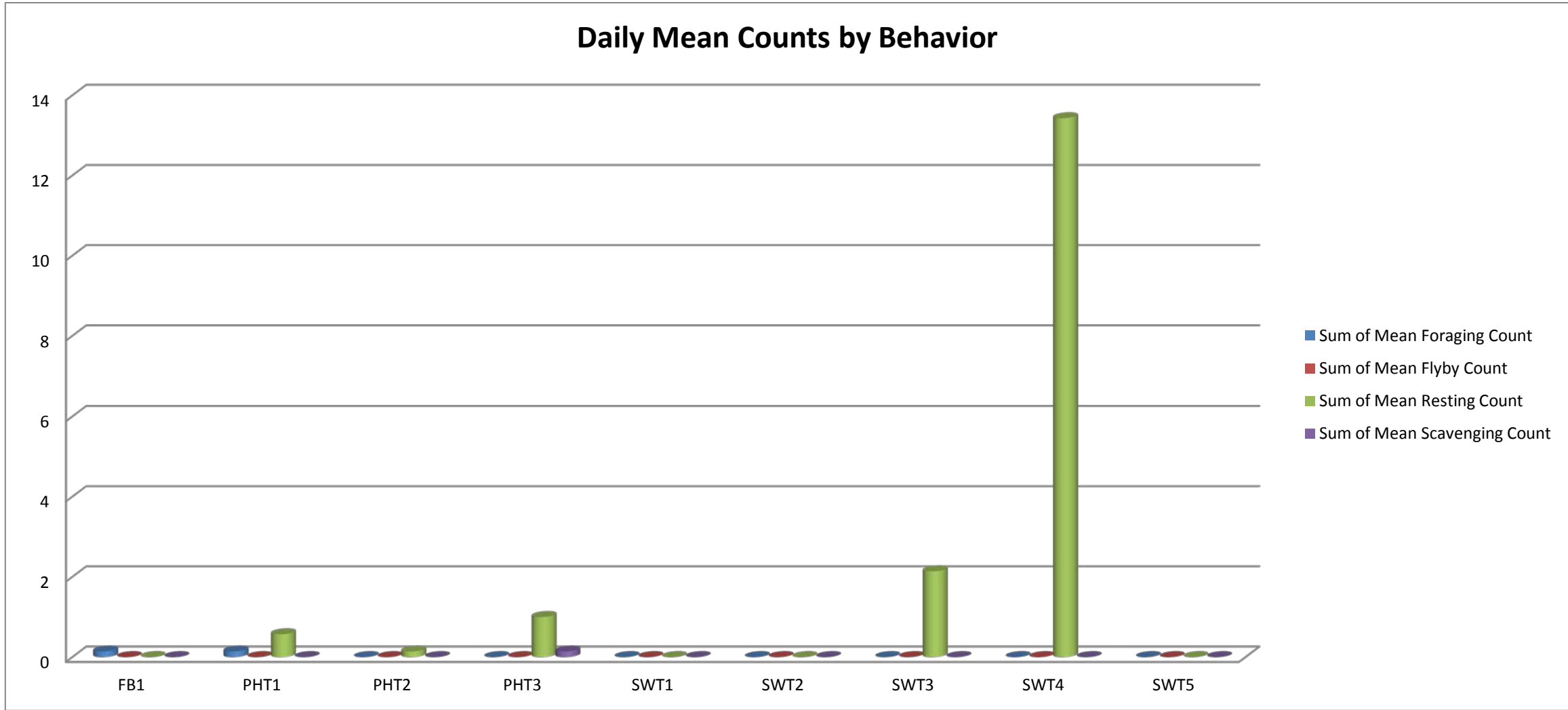
SW-T2

SW-T4

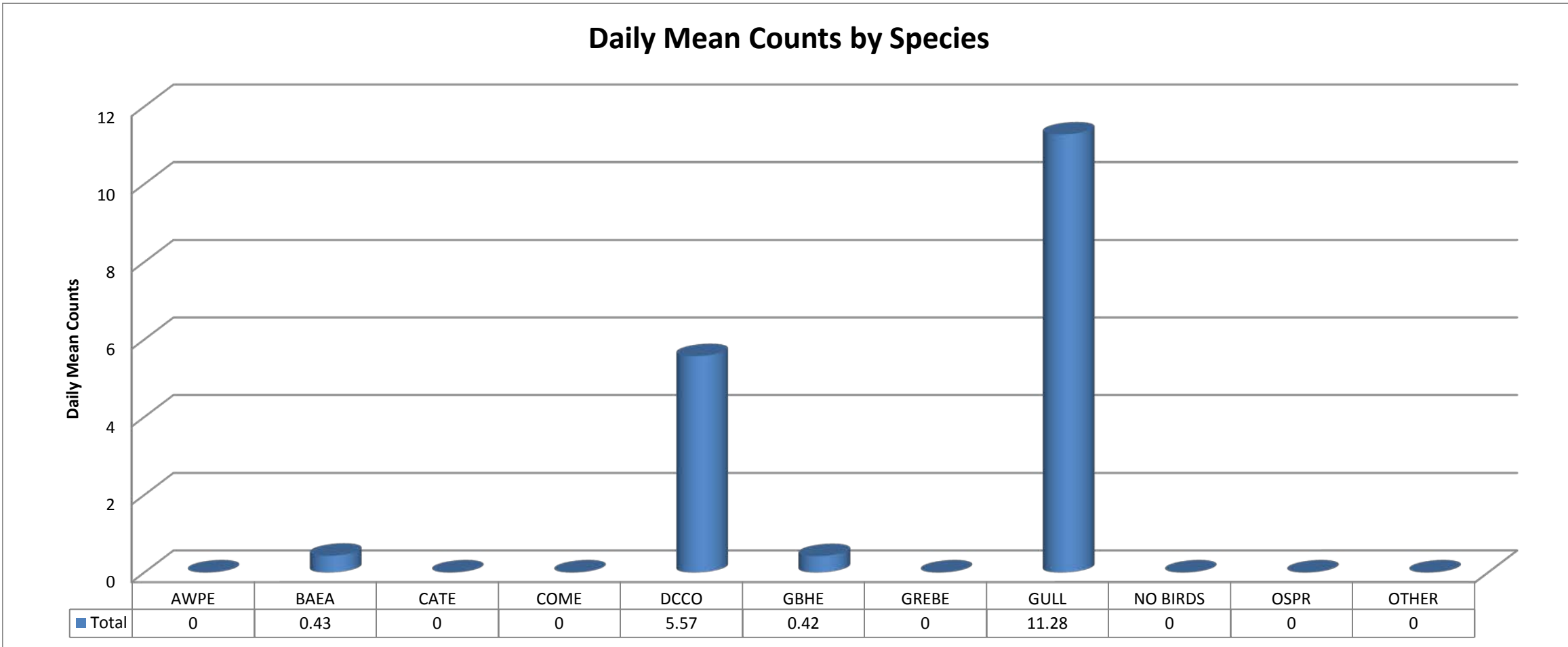
SW-T5

Oregon Shore

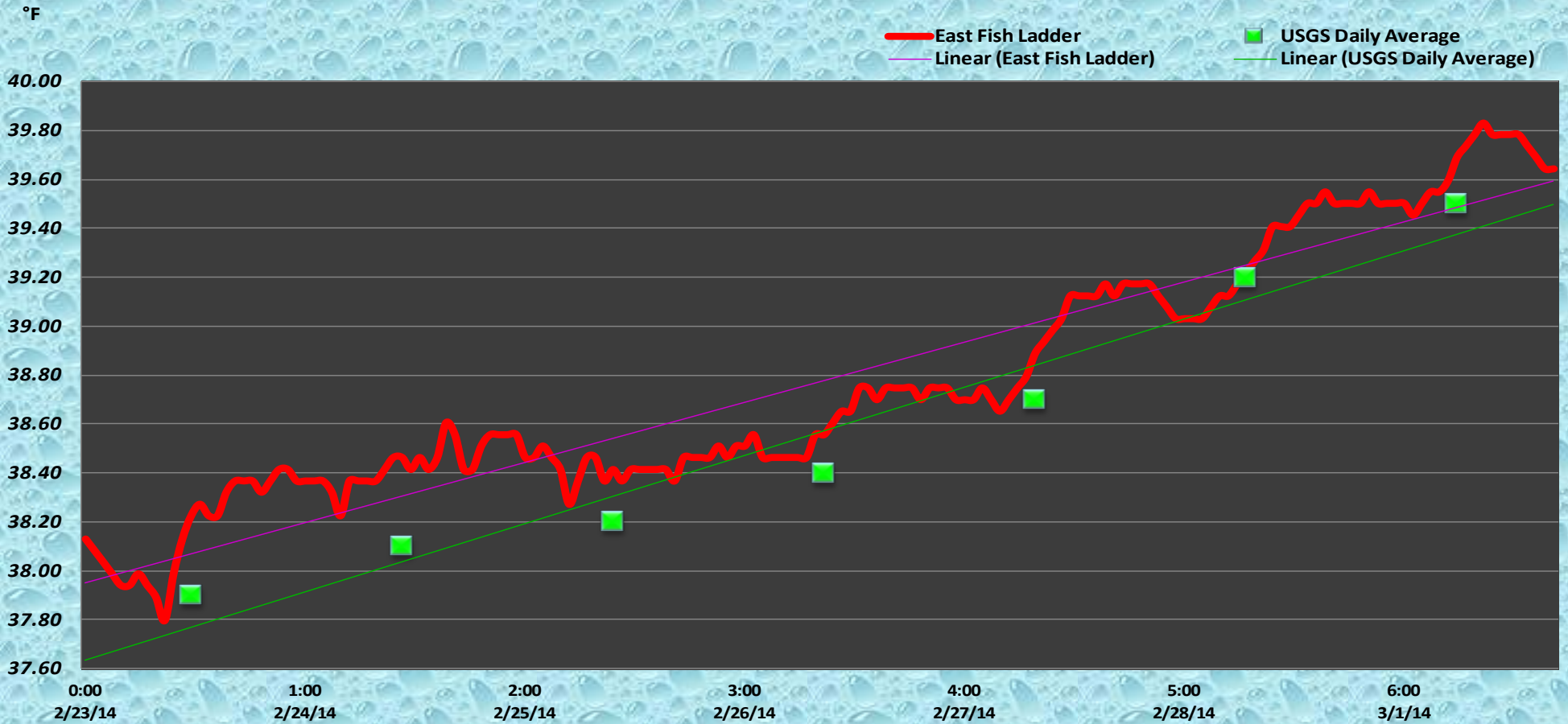




BAEA - Bald Eagle; COME - Common Merganser; DCCO - double crested cormorant; GBHE - Great Blue Heron; GREBE - Grebe; Gull- Gull (all species)  
 AWPE - American White Pelican; CATE- Caspian Tern; OSPR - Osprey



# The Dalles Dam Adult Fish Ladder River/Water Temperatures



Temp:			Secchi:	
37.9	SUN		2.0	
38.1	MON		2.0	
38.2	TUES		4.0	
38.4	WED		3.0	
38.7	THUR		3.0	
39.2	FRI		4.0	
39.5	SAT		4.0	
AVG: 38.6	AVG:		3.1	

The Dalles Dam Daily Readings and Averages for  
Temperatures, Secchi, Entrances, and Spill

= out of criteria

Date:	North Fish Ladder		East Fish Ladder										S P I L L  O N  S E A L	
	DEWATERED		East Entrance					West Entrance			South Entrance			
			Differential	E1Depth	E2 Depth	E3 Depth	JP 6	Differential	W1Depth	W2 Depth	W3 Depth	Differential		S1 Depth
23-Feb-14	AM SCADA inspection		1.4	1.1	12.6	12.6	8.2	1.5	9.1	9.0		1.2	7.1	8.1
			1.3	1.0	12.5	12.5	8.9	1.6	9.0	9.0		0.9	8.2	8.0
24-Feb-14	AM SCADA inspection		1.7	1.2	12.6	12.3	7.7	1.5	9.2	9.3		0.9	7.7	8.4
25-Feb-14	AM SCADA inspection		1.2	0.0	8.2	8.3	8.5	1.2	4.1	8.3		1.0	7.0	0.1
			1.2	0.0	8.4	8.3	8.9	1.3	4	8.2		1.0	7.2	0.0
26-Feb-14	AM SCADA inspection		1.4	0.0	11.9	12.0	7.1	1.3	8.9	9.0		0.9	8.2	8.2
			1.5	0.1	12.1	12.1	8.2	1.3	9.1	9.2		0.9	8.2	8.2
27-Feb-14	AM SCADA inspection		1.7	0.2	12.1	12.1	8.1	1.4	9.1	9.1		0.8	8.2	8.2
			1.8	0.0	12.0	11.9	9.0	1.7	8.4	8.5		1.1	8.1	8.0
28-Feb-14	AM SCADA inspection													
	1.3	9.6	1.6	0.0	12.0	12.9	8.9	1.5	9.0	9.0		0.9	8.1	8.0
1-Mar-14	AM SCADA inspection		1.5	0.1	12.7	12.7		1.4	10.0	9.0		0.8	8.3	8.2
	1.2	9.6	1.3	0.0	12.7	12.7	9.1	1.4	9.1	9.1		0.9	8.3	8.0
<b>AVG:</b>	<b>1.3</b>	<b>9.6</b>	<b>1.5</b>	<b>0.3</b>	<b>11.7</b>	<b>11.7</b>	<b>8.4</b>	<b>1.4</b>	<b>8.6</b>	<b>8.9</b>		<b>0.9</b>	<b>7.9</b>	<b>6.8</b>